



US Army Corps
of Engineers.

SAN FRANCISCO DISTRICT

PUBLIC NOTICE

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RESPONSE REQUIRED BY: NOVEMBER 21, 2000

Regulatory Branch
333 Market Street

San Francisco, CA 94105-2197

PROJECT MANAGER: Peter Fox Phone: (415)977-8454/E-mail: pfox@smtp.spd.usace.army.mil

1. INTRODUCTION: Hanson Marine Operations, through its agent L.W. Appleton at P.O. Box 580, Pleasanton, California 94566, phone (925-426-4051) has applied for a ten year Department of the Army permit to dredge sand from the Middle Ground Island Sand Shoal in Suisun Bay, Solano County, California. The purpose of the dredging is to obtain commercial grade sand to sell for use in construction projects throughout the Bay area. This application is being processed pursuant to the provisions of Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

2. PROJECT DESCRIPTION: As shown in the attached drawings (Sheets 1 and 2), Hanson Marine Operations, successor in interest to Tidewater Sand and Gravel, proposes to remove up to 250,000 cubic yards of sand annually from submerged shoals at Middle Ground Island. They propose to transport dredged material by barge to established sand yards or other appropriate upland sites which are not subject to Corps' regulatory authority. Sand mining has been occurring at Middle Ground Island shoal, a privately owned tract, for more than 25 years. The applicant also proposes to moor an approximately 800 square feet spud barge, to be used as an offloading facility at a designated sand yard. Pipelines will be used both to offload the sand from the barge and for sand delivery purposes.

Typical sand mining equipment involves the use of a dredge pump mounted on a self-loading barge with a capacity of approximately 2,500 cubic yards. During the sand mining operation, the barge is positioned at the shoal and the drag head is lowered to the bottom where a mixture of sand/water (15% sand and 85% water by volume) is pumped up to the barge. As the barge is filled with the slurry mixture, excess water containing up to 4% fine material from the shoal is returned to the Bay to maximize the

volume of sand for transportation. The rate of discharge of overflow water averages 16,000 gpm and an average time of discharge is about three hours. A trailing plume is visible behind the barge during flood and ebb tides and a more localized plume can be seen during slack tide. Since the drag head is partially buried or "potholed" in the bottom substrate, no incidental addition or redeposit of dredged material normally occurs during the sand mining operation. To avoid disturbance of delta smelt habitat, a special condition to the permit would preclude dredging within 200 feet of any shoreline and 250 feet of any water at a depth of 4 feet or less during MLLW.

3. STATE APPROVALS: The project's area is subject to the jurisdictional purview of the San Francisco Bay Conservation and Development Commission. The Corps of Engineers has made a preliminary determination that sand mining operations would not result in the discharge of dredged material into waters of the United States and, therefore, 401 water quality certification by the San Francisco Regional Water Quality Board may not be required. Water quality issues should be directed to the Executive Officer, California Regional Water Quality Control Board, San Francisco Bay Region, 1515 Clay Street, Suite 1400, Oakland, California 94612, by the close of the comment period.

4. PRELIMINARY ENVIRONMENTAL ASSESSMENT: The Corps has assessed the environmental impacts of the action proposed in subject permit application in accordance with the requirements of the National Environmental Policy Act of 1969 (Public Law 91-190), and pursuant to Council on Environmental Quality's Regulations 40 CFR 1500-1508, and Corps of Engineers' Regulations 33 CFR 230 and 325. Unless otherwise stated, the Preliminary Environmental Assessment presented herein

describes only the direct, indirect, and cumulative impacts resulting from activities within the jurisdiction of the Corps.

The Preliminary Environmental Assessment resulted in the following findings:

a. IMPACTS ON THE AQUATIC ECOSYSTEM:

(1) PHYSICAL / CHEMICAL CHARACTERISTICS AND ANTICIPATED CHANGES:

Substrate: The submerged lands at Middle Ground Island shoal cover an area approximately 367 acres in size and vary in depth from -2 feet MLLW to -35 feet MLLW. Dredging activities could account for the removal of up to 250,000 cubic yards (cy) of sand per year and up to 2,500,000 cy of sand over a ten year period. A typical dredging operation would occur in waters 25 feet to 35 feet in depth. Each dredging episode would remove approximately 2,500 cy of sand, creating localized depressions in the shoal of 2 feet or more in depth and less than one acre in area. Sand and other sediments transported down the Sacramento and San Joaquin Rivers into Suisun Bay would probably replace material removed by dredging operations; however, the rate of material replenishment in the shoal area is not known. Shoal formation is a dynamic process of sediment transport, deposition, and accretion, resulting in highly variable substrate conditions. Since these natural processes are largely indistinguishable from the physical impacts of dredging operations, the associated effects of dredging operations on substrate would be short-term and minimal to minor in magnitude.

Water Quality: Dredging operations and the resulting overflow plume may affect water quality variables, such as dissolved oxygen (DO), total suspended solids (TSS), and turbidity. Turbidity near the dredging site would increase because of additional TSS in the water column. DO levels in the water column would decrease during dredging operations due to increased turbidity. Conditions in the water column would likely return to ambient following each dredging episode. The associated effects of dredging operations on these water quality variables would be adverse but short-term

and minimal in magnitude. Under normal aquatic conditions, dredged material would not likely harbor contaminants, since sand particles do not adsorb, absorb, or bind pollutants, and such material is normally exempt from Federal testing requirements [40 CFR Part 230.6(a)]. Toxicity studies previously required by the Regional Water Quality Control Board conclude that no adverse chemical effects would occur within the water column from the discharge of barge overflow water.

(2) BIOLOGICAL CHARACTERISTICS AND ANTICIPATED CHANGES

Endangered Species: Federally-listed endangered adult winter-run chinook salmon (*Oncorhynchus tshawytscha*) migrate through San Francisco Bay, as well as Suisun Bay and Honker Bay, to spawning areas in the upper Sacramento River during the late fall and early winter. Juveniles travel downstream through San Francisco Bay to the Pacific Ocean in the late fall as well. The movements of adult and juvenile salmon through the bay system are thought to be rapid during these migrations. Since impacts in the water column during dredging episodes would be short-term, localized, and minor in magnitude, no potentially adverse effects to winter-run chinook salmon that may be near the dredging site are anticipated.

All life stages of the federally-listed threatened delta smelt (*Hypomesus transpacificus*) are likely to inhabit shoals and marshes of Suisun Bay, when sufficient outflows from the Delta cause the entrapment zone to be centered in this area. Delta smelt may be adversely affected by the loss of shallow water habitat, exposure of larvae and juveniles to high concentrations of metals and other contaminants, and reduction of zooplankton food sources from increased turbidity of the water column. Taking into account the restriction of sand dredging operations to waters 4 feet or more in depth, high ambient suspended sediment loads in the water column compared to the overflow plume, and the low probability of pollutants in the overflow plume, dredging activities at Middle Ground Island shoal would not likely cause adverse effects to delta smelt.

The federally-listed endangered tidewater goby

(*Eucyclogobius newberryi*) historically occurred in several tributary drainages of the San Francisco Bay area, which contained shallow water habitat (<3 feet) and low to moderate salinity ranges (2-15 ppts.). These previously identified populations have disappeared, and the current absence of the tidewater goby, particularly in Suisun Bay, may be explained by the presence of exotic predatory fish, such as striped bass, and other native predators. Although low salinities can periodically occur in Suisun Bay, when the entrapment zone is centered in this area, tidewater goby populations could not persist on a long-term basis as freshwater inflows seasonally diminish or would become highly susceptible to predation. Dredging activities at Middle Ground Island shoal would, therefore, not cause any adverse effects to the tidewater goby.

Habitat for Fish and Other Aquatic Organisms: Periodic dredging operations would have adverse but short-term minor impacts on fishes and fish habitat by temporarily increasing TSS and decreasing DO levels in the water column. Conditions in the water column at the shoal area would likely return to ambient shortly after the completion of each dredging episode. Dredging operations would also result in the removal of benthic organisms on a recurring basis, although recolonization of the substrate occurs rapidly. Since naturally variable substrate conditions may contribute to an unstable benthic community, the associated effects of dredging operations on benthic organisms would be adverse but short-term and minimal in magnitude. Biological studies required by the Regional Water Quality Control Board conclude that no adverse physical effects would occur to fisheries or certain benthic invertebrates, such as Dungeness crabs and Bay shrimp, as a result of dredging operations (MEC, 1993).

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The proposal would impact approximately 367 acres of EFH utilized by various species of sole, shark and rockfish. Our initial determination is that the proposed action would not have a substantial adverse impact on EFH or Federally managed fisheries in California waters. Our final determination relative to project impacts and the

need for mitigation measures is subject to review by, and coordination with, the National Marine Fisheries Service.

b. IMPACTS ON RESOURCES OUTSIDE THE AQUATIC ECOSYSTEM:

(1) PHYSICAL CHARACTERISTICS AND ANTICIPATED CHANGES

Air Quality: Dredging equipment would generate various air pollutant emissions, causing adverse but short-term and minimal effects on ambient air quality in the immediate vicinity of the dredging area. Since total direct emissions of criteria pollutants generated by dredging operations occurring in USACE jurisdiction (waters of the United States and adjacent wetlands) would not likely exceed the *de minimus* levels specified at 40 CFR 93.153, the dredging operations are considered to be exempt from the requirement of a CAA conformity determination. The project would therefore, conform to the State air quality implementation plan for California. The USACE has neither a practicable means nor a continuing program responsibility to control indirect project emissions.

(2) SOCIOECONOMIC CHARACTERISTICS AND ANTICIPATED CHANGES

Aesthetic Quality: Dredging equipment and barges are frequently observed throughout San Francisco Bay. Dredging activities are proposed for continuous operation including weekends and State holidays. The impact of periodic dredging operations, transportation of dredged material, and the overflow plume on visual resources would be adverse but short-term and minimal in magnitude.

Economics: Since sand dredged from the shoal is sold for commercial construction purposes, associated impacts of dredging operations on the applicants and on the local economy would be beneficial, long-term, and minor to major in magnitude.

Recreational Fishing: Shallower, sandy substrates in the vicinity of the shoal support

various sportfish species such as striped bass and sturgeon, generating diverse recreational fishing activity from May to October. Substrate modifications and the overflow plume caused by dredging activity may temporarily alter fish schooling and feeding in the area and reduce fishing success, particularly during peak use periods. The adverse effects of dredging activities on fishing would be short-term and minor to moderate in magnitude.

Transportation (Navigation): Stationary barges during dredging operations could pose a hazard to ship traffic, particularly where passage is confined by shallow waters at the shoal. Since dredging operations occur only on a periodic basis and do not normally enter the designated channel area, ship traffic would not likely be affected by this activity.

(3) HISTORIC - CULTURAL CHARACTERISTICS AND ANTICIPATED CHANGES

Since the shoal areas are comprised of recently deposited sediments, archaeological resources would not likely be encountered during dredging operations. However, if any archaeological resources are encountered during the dredging operations, the Corps of Engineers would consult with the State Historic Preservation Officer pursuant to Section 106 of the National Historic Preservation Act and take into account any project effects on such properties.

c. SUMMARY OF INDIRECT IMPACTS:

None identified at this time.

d. SUMMARY OF CUMULATIVE IMPACTS:

Sand dredging occurs within portions of Central San Francisco Bay at Point Knox, Alcatraz, and the Presidio shoals, in Suisun Bay at Middle Ground Island shoal, and within areas of the Sacramento-San Joaquin Delta estuary. Combined dredging operations account for the removal of approximately 1.3 million cy of sand per year from these shoal areas and may cause cumulative effects to substrate, water quality, benthic organisms and economics.

e. CONCLUSION AND RECOMMENDATIONS:

Based on an analysis of the identified impacts, a preliminary determination has been made, concluding that it will not be necessary to prepare an Environmental Impact Statement for the proposed activity. This Environmental Assessment has not yet been finalized, and the preliminary determination may be reconsidered if additional information is developed.

5. EVALUATION OF ALTERNATIVES: Projects involving fill discharges into waters of the United States must comply with the guidelines promulgated by the Administrator of the Environmental Protection Agency under Section 404(b) of the Clean Water Act (33 U.S.C.1344(b)). An evaluation pursuant to the Guidelines presume that, for non-water dependent projects, other practicable, less environmentally-damaging alternatives exist, unless clearly demonstrated otherwise by the applicant.

6. PUBLIC INTEREST EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. This decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

7. CONSIDERATION OF COMMENTS: The Corps is soliciting comments from the public; Federal, State, and local agencies, and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of the proposed activity. All comments received will be considered in the determination whether to issue, modify, condition, or deny a permit for the proposed activity. To make

or deny a permit for the proposed activity. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, and other environmental factors which are addressed in a final Environmental Assessment or Environmental Policy Act. Comments are also used to determine the overall interest of the proposed activity.

8. SUBMISSION OF COMMENTS: During the specified comment period, interested parties may submit written comments to the San Francisco District, Regulatory Branch, citing the applicant's name, and public notice date and number in the letter. Comments may include a request for a public hearing on the project prior to a determination on the application; such requests shall state, with particularity, the reasons for holding a public hearing. All comments will be forwarded to the applicant for resolution or rebuttal. Additional information may be obtained from the applicant or by contacting Mr. Peter Fox of the Regulatory Branch at (415) 977-8454.